

REMARKS

Claims 1-23 were pending in the application. Claims 8, 11, and 19 have been amended. No claims have been cancelled. Claims 24-26 have been added. Therefore, claims 1-26 are pending and are submitted for reconsideration.

I. Rejection under 35 U.S.C. § 103 – Endo

Claims 1-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 1 251 725 (hereinafter “Endo”). Claims 1, 11, and 19 are independent claims. The rejection should be withdrawn for at least the following reasons.

A. The Claims

Independent claim 1 recites an interfacing device that integrates feeder mechanisms and surface mount machines of differing manufacture and that comprises:

a carriage to which a feeder plate mechanism is mounted, wherein said carriage provides external feeder connectors from a surface mount machine to the feeder plate mechanism; and
a plurality of feeder mechanisms that are received by said feeder plate mechanism, wherein said feeder mechanisms provide internal feeder connectors from said feeder plate mechanism to said plurality of feeder mechanisms, and wherein said feeder plate mechanism adapts said external feeder connectors to said internal feeder connectors.

Independent claim 11 recites a method of interfacing and integrating feeder mechanisms to surface mount machines of differing manufacture that comprises:

mounting a feeder plate mechanism to a carriage, wherein said carriage provides external feeder connectors from a surface mount machine to the feeder plate mechanism;
connecting a plurality of feeder mechanisms to said feeder plate mechanism, wherein said feeder mechanisms couple to said feeder plate mechanism via internal feeder connectors, and wherein said feeder plate mechanism adapts said external feeder connectors to said internal feeder connectors;
coupling said carriage to the surface mount machine, and
selecting, via a switch within the surface mount machine, a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers contained within said feeder plate mechanism.

Independent claim 19 recites an interfacing device that integrates feeder mechanisms and surface mount machines of differing manufacture and that comprises:

a carriage to which a feeder plate mechanism is mounted, wherein said carriage provides external feeder connectors from a surface mount machine to the feeder plate mechanism, and wherein said external feeder connectors comprise pneumatic and electrical connections;

a plurality of feeder mechanisms that are received by said feeder plate mechanism, wherein said feeder mechanisms provide internal feeder connectors from said feeder plate mechanism to said plurality of feeder mechanisms, wherein said internal feeder connectors comprise pneumatic and electrical connections, wherein said feeder plate mechanism adapts said external feeder connectors to said internal feeder connectors, and wherein mechanical stops and positioning pins secure said feeder mechanisms within said feeder plate mechanism;

and

means for selecting a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers, the means being contained within said interface device.

The rejection should be withdrawn at least because:

(i) Endo fails to teach or suggest an interfacing device (claims 1 and 19) or a method (claim 11) that comprises, among other things, a carriage that “provides external feeder connectors from a surface mount machine to the feeder plate mechanism;”

(ii) it would not have been obvious to modify Endo to provide a carriage that “provides external feeder connectors from a surface mount machine to the feeder plate mechanism” as recited in claims 1, 11, and 19; and

(iii) Endo fails to teach or suggest a method that comprises, among other things, “selecting, via a switch within the surface mount machine, a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers contained within said feeder plate mechanism” (claim 11) or an interfacing device that comprises, among other things, “means for selecting a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers, the means being contained within said interface device” (claim 19).

B. Endo

Endo discloses a component feeder exchange cart (3) and a method for positioning a component feeder. The cart (3) includes a component supply unit (2) with cassettes (7), a reel box (9) for a reel (8), and a collecting box (10). The cart (3) can be moved to a component mounting apparatus (1) such that the component supply unit (2) can be coupled to a fixing device (4) on the mounting apparatus (1). *See* Endo at Fig. 1. The Examiner states that the cart (3) corresponds to a “carriage;” the component supply unit (2) corresponds to a “feeder plate mechanism;” and the component mounting apparatus (1) corresponds to a “surface mount machine.” *See* Office Action at p. 2 (a)(i). The Examiner further states that Endo discloses external feeder connectors (39, 78) that connect to a surface mount machine (1) and a plurality of internal feeder connectors (19). *See* Office Action at pp. 2-3.

With regard to (i) above, the Examiner recognizes that Endo does *not* disclose a **carriage** that “provides external feeder connectors from a surface mount machine to the feeder plate mechanism” as recited in claims 1, 11, and 19. *See* Office Action at p. 3 (b)(i). Rather, Endo discloses a component supply unit (2) that provides external connectors (39, 78) from a component mounting apparatus (1) to the component supply unit (2).

With regard to (ii) above, it would not have been obvious to one of ordinary skill in the art to modify Endo to have the carriage (cart 3) provide the external feeder connectors from a surface mount machine to the feeder plate mechanism. The Examiner contends that one of ordinary skill in the art would have been motivated to modify Endo “to more conveniently connect and disconnect the feeder plate mechanism from the surface mount machine due to the carriage being more easily accessible than the back side of the feeder plate mechanism.” Office Action at p. 4 (d)(2). Applicant respectfully submits that such statement is incorrect.

It would not be easier to access the cart (3) than the back side of the component supply unit (2) to connect and disconnect the component supply unit from the component mounting apparatus (1). Endo discloses a component supply unit (2) that slides into a fixing mechanism (4) on the component mounting apparatus (1). The fixing device (4) includes

guide rollers (32), stoppers (26, 28) and guide plates (31). The air joint (23) of the fixing device (4) is automatically connected to the air joint (39) of the component supply unit (2) when the component supply unit (2) is clamped in position. See ¶ [0050]. Thus, Endo already provides a positioning mechanism and positioning method “for achieving accurate and easy positioning of the component supply unit.” Endo at ¶ [0014]. Therefore, one of ordinary skill in the art would not have been motivated to modify Endo to have a carriage (cart 3) that “provides external feeder connectors from a surface mount machine to the feeder plate mechanism” as recited in claims 1, 11, and 19, as such a modification would complicate the attachment process. The reason for accepting such a complication is provided in Applicant’s disclosure, not in Endo. Therefore, the rejection should be withdrawn. Applicant respectfully requests reconsideration and withdrawal of the rejection.

With regard to (iii) above, Endo fails to teach or suggest a method that comprises, among other things, “selecting, via a switch within the surface mount machine, a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers contained within said feeder plate mechanism” (claim 11) or an interfacing device that comprises, among other things, “means for selecting a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers, the means being contained within said interface device” (claim 19). The Examiner contends that Endo discloses a central processing unit in Figure 1 and remarks “that a chip mounting head would contain a software switch to indicate the appropriate component feeder to select based upon the type of component demanded by the program.” Office Action at p. 7 (a)(iv).

However, there is no teaching in Endo that the alleged central processing unit shown in Figure 1 would provide a switch within the surface mount machine to select “a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers” (claim 11) or “means for selecting a control program for a type of feeder mechanism from a plurality of control programs for feeder mechanisms of different manufacturers” (claim 19). Therefore, the rejection of claims 11 and 19 is improper. Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 2-10, 12-18, 20-23, and new claims 24-26 depend from claim 1, claim 11, or claim 19, and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

For example, new dependent claims 24 and 26 recite an interfacing device that comprises, among other things that “the external feeder connectors are configured to be interchangeable with different external feeder connectors to connect the feeder plate mechanism to a different surface mount machine,” which is not taught or suggested in Endo. New dependent claim 25 recites a method that comprises, among other things, “exchanging the external feeder connectors with different external feeder connectors to connect the feeder plate mechanism to a different surface mount machine,” which is not taught or suggested in Endo.

II. Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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